State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES
Division of Flood Management

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OFFICE REPORT

On

THE INSPECTION OF FLOOD CONTROL STRUCTURES ON THE SACRAMENTO AND SAN JOAQUIN RIVERS AND THEIR TRIBUTARIES

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INTRODUCTION

The flood control system of the Sacramento and San Joaquin Valleys depends on the levee system and the many structures built on the tributaries and bypasses. These structures are fixed crest diversion weirs, controllable diversion structures, outfall structures, drop structures, and interior drainage pumping plants. This report reviews the maintenance of these structures.

History of Report

The maintenance effort expended on these structures has been the subject of an annual report dating back to 1959. A report entitled, "Location, Description and Inventory of Miscellaneous Project Structures, Sacramento River Flood Control Project, and American River Flood Control Project", was issued and was followed shortly thereafter by a maintenance status report. Maintenance status reports on flood control structures have since been made on an annual basis.

Responsibility for Maintenance

The flood control structures included herein were, in general, constructed as an integral part of the flood control project, by the U.S. Army Corps of Engineers and the State of California. Operation and Maintenance manuals were issued by the constructing authority to the maintaining agency. Maintaining agencies agreed to be responsible for the maintenance of the project construction. The State of California makes periodic inspections of the quality of the maintenance performed by the maintaining agencies and reports its findings to those agencies. These inspections are made on behalf of The Reclamation Board by the Flood Project Inspection Section, Flood Operations Branch, Division of Flood Management.

The purpose of the inspection is to identify and report to the constructing authority and the maintaining agency any condition that may diminish the ability of the structure to perform its intended function.

CHAPTER I

FLOOD CONTROL STRUCTURES INSPECTED ON THE SACRAMENTO RIVER AND TRIBUTARIES

2002

INSPECTION OF NORTH FORK FEATHER RIVER DIVERSION STRUCTURE (Maintained by Plumas County) September 2002

1. **Condition of concrete diversion structure.**

   a. **Good.**

2. **Condition of the gauging house and equipment.**

   a. **Fair. There are still numerous bullet holes in the door.**

3. **Condition of the steel trash racks.**

   a. **Good.**

4. **Condition of debris deflection structure.**

   a. **Good. The damaged sections reported in the 1998 Structure Report have been repaired.**

5. **Condition of the revetments.**

   a. **Good.**

6. **Accumulation of trash and debris around structure or in the channel.**

   a. **Minimal amount of debris around the deflection structure.**

7. **Vegetation around the structure or in the channel.**

   a. **None.**

8. **Condition of the conduits.**

   a. **The center conduit was inspected this year and found to be in good condition. However the separations at the joints between the monoliths have increased.**

INSPECTION OF NORTH FORK FEATHER RIVER DIVERSION STRUCTURE (Maintained by Plumas County) September 2002

9. Condition of the discharge structure.

a. The structure is in good condition

10. Comments:

a. Good maintenance.

NOTE: Routinely, one of the three diversion structure conduits is jointly inspected each year with the Corps of Engineers and Plumas County

INSPECTION OF NORTH FORK FEATHER RIVER
DIVERSION STRUCTURE
(Maintained by Plumas County)
September 2002

Upstream at the inlet side of the diversion structure.

Steel trash racks.

INSPECTION OF NORTH FORK FEATHER RIVER
DIVERSION STRUCTURE
(Maintained by Plumas County)
September 2002

The diversion structure at the conduit inlet.

Downstream at the outlet works.
Note open gate.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 1
(Maintained by Plumas County)
September 2002

1. **Condition of grouted rock revetment drop structure.**

   a. **Good.**

2. **Condition of channel banks upstream and downstream of the drop structure.**

   a. **Good.**

3. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

4. **Vegetation around the structure, in the channel banks or in the channel.**

   a. **None.**

5. **Comments:**

   a. **Good maintenance.**

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 1
(Maintained by Plumas County)
September 2002

The structure from the left bank.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 2
(Maintained by Plumas County)
September 2002

1. **Condition of grouted rock revetment drop structure.**

   a. **Good.**

2. **Condition of the channel banks upstream and downstream of the drop structure.**

   a. **Good.**

3. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

4. **Vegetation around the structure, in the channel banks or in the channel.**

   a. **Minimal.**

5. **Comments:**

   a. **Good maintenance.**

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 2
(Maintained by Plumas County)
September 2002

Upstream at the drop structure from the left bank.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 3
(Maintained by Plumas County)
September 2002

1. Condition of grouted rock revetment drop structure.

a. Good.

2. Condition of channel banks upstream and downstream of the drop structure.

a. Good.

3. Accumulation of trash and debris around the structure or in the channel.

a. None.

4. Vegetation around the structure, in the channel banks or in the channel.

a. None.

5. Comments:

a. Good maintenance.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 3
(Maintained by Plumas County)
September 2002

Upstream at the drop structure from the left bank.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 4
(Maintained by Plumas County)
September 2002

1. Condition of grouted rock revetment drop structure.

a. Good.

2. Condition of channel banks upstream and downstream of the drop structure.

a. Good.

3. Accumulation of trash and debris around the structure or in the channel.

a. None.

4. Vegetation around the structure, in the channel banks or in the channel.

a. None.

5. Comments:

a. Good maintenance.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 4
(Maintained by Plumas County)
September 2002

The drop structure from the left bank.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 5
(Maintained by Plumas County)
September 2002

1. Condition of grouted rock revetment drop structure.

a. Good.

2. Condition of channel banks upstream and downstream of the drop structure.

a. Good.

3. Accumulation of trash and debris around the structure or in the channel.

a. None.

4. Vegetation around the structure, in the channel banks or in the channel.

a. None.

5. Comments:

a. Good maintenance.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 5
(Maintained by Plumas County)
September 2002

Upstream at the drop structure from the left bank.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 6
(Maintained by Plumas County)
September 2002

1. **Condition of grouted rock revetment drop structure.**

   a. **Good.**

2. **Condition of channel banks upstream and downstream of the drop structure.**

   a. **Good.**

3. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

4. **Vegetation around the structure, in the channel banks or in the channel.**

   a. **Minimal.**

5. **Comments:**

   a. **Good maintenance.**

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 6
(Maintained by Plumas County)
September 2002

Upstream side of structure from the left bank.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 7
(Maintained by Plumas County)
September 2002

1. Condition of grouted rock revetment drop structure.

a. Good.

2. Condition of channel banks upstream and downstream of the drop structure.

a. Good.

3. Accumulation of trash and debris around the structure or in the channel.

a. None.

4. Vegetation around the structure, in the channel banks or in the channel.

a. Minimal.

5. Comments:

a. Good maintenance.

INSPECTION OF NORTH FORK FEATHER RIVER
DROP STRUCTURE NO. 7
(Maintained by Plumas County)
September 2002

Upstream at the drop structure from the left bank.

INSPECTION OF CLOVER CREEK DIVERSION STRUCTURE

(Maintained by Lake County Flood Control and Water Conservation District)

September 2002

1. **Condition of concrete weir structure.**

    a. **Good, but ineffective due to accumulation of gravel upstream of the structure.**

2. **Condition of the diversion structure and wing walls.**

    a. **Good, but pipes are three quarters full of sand.**

3. **Condition of the bulkhead.**

    a. **Good.**

4. **Condition of the control gates and mechanism.**

    a. **Good.**

5. **Accumulation of trash and debris around the structures or in the channel.**

    a. **Gravel has accumulated and fills the channel to the top of the weir, thus it does not pond water upstream as it was designed to do.**
    b. **Gravel has accumulated around the outlet side of the structure and has nearly filled the discharge pipes.**

6. **Vegetation around the structures or in the channel.**

    a. **A pilot channel has been cleared upstream of the structure.**

    b. **There is dense vegetation in the creek channel, 100 feet downstream of the structure.**

7. **Comments:**

    a. **Fair maintenance.**

INSPECTION OF CLOVER CREEK DIVERSION STRUCTURE
(Maintained by Lake County Flood Control and Water Conservation District)
September 2002

Water flowing over the concrete weir.
Weir is ineffective due to gravel build-up upstream.

Downstream at the diversion structure on the left bank.

INSPECTION OF CLOVER CREEK DIVERSION STRUCTURE

(Maintained by Lake County Flood Control and Water Conservation District)

September 2002

Two of the six, 36 inch discharge pipes at the outlet side of diversion structure. These pipes are nearly full of sediment.

INSPECTION OF MIDDLE CREEK PUMPING PLANT
(Maintained by State of California)
(Sutter Maintenance Yard)
September 2002

1. Condition of main pump structure and switchboard house.

a. Poor. The separation between the top of the surge box and the structure appears to have a eight 1/2-inch side displacement. The surge box has settled 12 inches since 1962 and is 7.6 feet below the top of the structure. The surge box is moving towards the channel. There is approximately a 2-inch deflection. There have been no changes since last reported.

2. Condition of pumps and motors.

a. Good.

3. Condition of electrical equipment.

a. Good.

4. Condition of control gates, mechanisms, and flap gates.

a. Good.

5. Condition of the trash racks.

a. Good.

6. Condition of log boom.

a. Good.

7. Condition of hydrographic facilities.

a. Good.

8. Accumulation of trash or debris in the sump.

a. None.

INSPECTION OF MIDDLE CREEK PUMPING PLANT
(Maintained by State of California)
(Sutter Maintenance Yard)
September 2002

9. Vegetation in sump.

a. Minimal.

10. Comments:

a. The Sutter Maintenance Yard recently took over responsibility for the pumping plant as part of the newly formed Maintenance Area 17.

INSPECTION OF MIDDLE CREEK PUMPING PLANT
(Maintained by State of California)
(Sutter Maintenance Yard)
September 2002

Upstream at the pumping plant from the left bank levee.

Upstream at the intake side of the pumping plant.

INSPECTION OF HIGHLAND CANAL DIVERSI0N WEIR AND DRAINAGE STRUCTURE (Maintained by State of California (Sutter Maintenance Yard) September 2002

1. **Condition of concrete weir structure and stilling basin.**

   a. **Good.**

2. **Condition of drainage structure.**

   a. **Good.**

3. **Condition of the concrete abutments and wing walls.**

   a. **There is a displacement between both wing walls and the structure, 2 inches on left wing wall and two ½ inches on the right wing wall. Displacement has been stable for at least 5 years.**

4. **Condition of the revetment.**

   a. **Good.**

5. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

6. **Vegetation around the structure or in the channel.**

   a. **Minimal tule growth in discharge channel.**

7. **Comments:**

   a. **Good maintenance.**

INSPECTION OF HIGHLAND CANAL DIVERSI0N WEIR AND DRAINAGE STRUCTURE
(Maintained by State of California)
(Sutter Maintenance Yard)
September 2002

Downstream at the concrete weir from the left bank.

The intake of diversion pipes.

INSPECTION OF HIGHLAND CANAL DIVERSI0N WEIR AND DRAINAGE STRUCTURE
(Maintained by State of California)
(Sutter Maintenance Yard)
September 2002

Upstream at the discharge pipes and flap gates.

INSPECTION OF BIG CHICO CONTROL STRUCTURE
(Maintained by Butte County)
September 2002

1. **Condition of concrete control structure.**

   a. **Good.**

2. **Condition of bulkheads.**

   a. **Good.**

3. **Condition of gate controls and mechanisms.**

   a. **Butte County will test gates prior flood season.**

4. **Condition of revetment.**

   a. **Good.**

5. **Accumulation of trash and debris around the structure in the channel.**

   a. **None.**

6. **Vegetation around structure and in the channel.**

   a. **There is minimal vegetation in the revetment on the upstream side of the structure.**

7. **Comments:**

   a. **Clear growth.**

   b. **Contact DWR Inspector prior to gate test.**

   c. **Good maintenance.**

INSPECTION OF BIG CHICO CONTROL STRUCTURE
(Maintained by Butte County)
September 2002

Downstream at inlet end of structure.

Upstream at discharge end of structure from the right bank.

INSPECTION OF LINDO CHANNEL DIVERSION WEIR
(Maintained by Butte County)
September 2002

1. Condition of concrete weir structure and stilling basin, and velocity dissipaters.

a. There are minor joint separations on the north and south ends of the weir where it contacts the abutments.

b. There is minor damage to several velocity dissipaters and severe damage to one.

2. Condition of concrete abutments and wing walls.

a. Good.

3. Condition of revetment.

a. Good.

4. Accumulation of trash and debris around the structure or in the channel.

a. None.

5. Vegetation around structure or in the channel.

a. Minimal.

6. Condition of gauging house and equipment.

a. Fair.

7. Comments:

a. Repair the severely damaged velocity dissipater. This was first noted in the 2000 Structure Report but has not been repaired.

b. Remove vegetation from channel.

c. Fair maintenance.

INSPECTION OF LINDO CHANNEL DIVERSION WEIR
(Maintained by Butte County)
September 2002

Upstream side of the structure from the left bank.

The velocity dissipaters on the downstream side of structure from the left bank.

INSPECTION OF LINDO CHANNEL DIVERSION WEIR
(Maintained by Butte County)
September 2002

View of severely damaged velocity dissipater.

INSPECTION OF LINDO CHANNEL CONTROL STRUCTURE
(Maintained by Butte County)
September 2002

1. **Conditions of concrete control structure.**

   a. **Good.**

2. **Condition of bulkheads.**

   a. **There is a ½ inch separation in the joint between the south end bulkhead and the structure. This joint separation is stable.**

3. **Condition of control gates and mechanisms.**

   a. **Good.**

4. **Condition of revetment.**

   a. **Poor. The downstream rock and gunite skirt is severely damaged.**

5. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

6. **Vegetation around the control structure or in the channel.**

   a. **None.**

7. **Comments:**

   a. **Butte Co. will test the control gates prior to flood season.**

   b. **Repair the rock and gunite skirt downstream of structure.**

   c. **Fair maintenance.**

INSPECTION OF LINDO CHANNEL CONTROL STRUCTURE
(Maintained by Butte County)
September 2002

Downstream at intake side of structure.

Upstream at discharge side of structure.

INSPECTION OF LINDO CHANNEL CONTROL STRUCTURE
(Maintained by Butte County)
September 2002

View of damaged rock and gunite skirt down stream of structure.

INSPECTION OF LITTLE CHICO CREEK CONTROL AND WEIR STRUCTURES (Maintained by State of California) September 2002

1. **Condition of concrete control structure.**

   a. **Fair. The base at the downstream side of the control structure is beginning to undermine.**

2. **Condition of bulkheads and wing walls of the control structure.**

   a. **Previously reported separations and displacements are stable.**

3. **Condition of concrete weir, stilling basin, and velocity dissipaters.**

   a. **Minor cracks in the weir and minor spalling of concrete on the weir invert. Repairs have been made on past reported damage.**

4. **Condition of concrete bulkheads of the weir.**

   a. **Good.**

5. **Condition of bulkheads and fill between the control structure and the weir.**

   a. **Good**

6. **Condition of the revetments.**

   a. **Poor. The revetment/gunite apron on the downstream end of the control structure is severely damaged.**

7. **Condition of the log boom.**

   a. **The log boom was removed by Sutter Maintenance Yard several years ago and there are no plans to reinstall it.**

8. **Condition of the gauging station and equipment.**

   a. **Good.**

INSPECTION OF LITTLE CHICO CREEK
CONTROL AND WEIR STRUCTURES
(Maintained by State of California)
September 2002

9. Accumulation of trash and debris around the structures or in the channel.

a. Minimal.

10. Vegetation around the control structure, the weir, or in the channel.

a. Sutter Maintenance Yard was removing vegetation at the time of the inspection.

11. Comments:

a. Repair the control structure base (downstream side) as soon as possible.

b. Continue to monitor joint separation between the control structure and the abutments and repair as needed.

c. Remove driftwood and cobbles from dissipaters.

d. Fair maintenance.

INSPECTION OF LITTLE CHICO CREEK
CONTROL AND WEIR STRUCTURES
(Maintained by State of California)
September 2002

Downstream at the control structure from the right bank.

Downstream at the control structure from the channel.

INSPECTION OF LITTLE CHICO CREEK
CONTROL AND WEIR STRUCTURES
(Maintained by State of California)
September 2002

Upstream at the control structure.

Downstream side of the control structure.
The gunite apron is severely damaged and the structure is partially undermined.

INSPECTION OF LITTLE CHICO CREEK
CONTROL AND WEIR STRUCTURES
(Maintained by State of California)
September 2002

South at the weir and stilling basin.

INSPECTION OF MOULTON WEIR
(Maintained by State of California)
September 2002

1. Condition of concrete weir structure and stilling basin.

a. Good.

2. Condition of concrete abutment and wing walls.

a. Good.

3. Condition of revetments.

a. Good.

4. Accumulation of trash and debris around structure or in the channel.

a. None.

5. Vegetation around the structure or in the channel.

a. None.

6. Condition of gauging house and equipment.

a. Good.

7. Comments:

a. Good maintenance.

INSPECTION OF MOULTON WEIR
(Maintained by State of California)
September 2002

South at the weir and stilling basin.

North at the downstream side of the weir from the left abutment.

INSPECTION OF COLUSA WEIR
(Maintained by State of California)
September 2002

1. Condition of concrete weir structure and stilling basin.
(Note: bridge across bypass not a part of weir structure)

a. Good.

2. Condition of concrete abutment and wing walls.

a. Good.

3. Condition of revetment.

a. Good.

4. Accumulation of trash and debris around the structure or in the channel.

a. Minimal.

5. Vegetation around the structure or in the channel.

a. None.

6. Condition of gauging house and equipment.

a. Good.

7. Comments:

a. Good.

INSPECTION OF COLUSA WEIR
(Maintained by State of California)
September 2002

Upstream side of weir from the north levee.

Downstream side of the weir from the south levee.

INSPECTION OF TISDALE WEIR
(Maintained by State of California)
September 2002

1. Condition of concrete weir structure and stilling basin.
(Note: bridge across bypass is not a part of weir structure)

a. Good.

2. Condition of concrete abutment and wing wall.

a. Good.

3. Condition of revetments.

a. Good.

4. Accumulation of trash and debris around the structure or in the channel.

a. None.

5. Vegetation around structure or in the channel.

a. Minimal.

6. Condition of gauging house and equipment.

a. Good.

7. Comments:

a. Good maintenance.

INSPECTION OF TISDALE WEIR
(Maintained by State of California)
September 2002

Upstream side of the weir from the north abutment.

Downstream side of the weir from the south abutment.

INSPECTION OF BUTTE SLOUGH OUTFALL STRUCTURE
(Maintained by State of California)
September 2002

1. **Condition of walkway and supports.**

    a. **Good.**

2. **Condition of pipes.**

    a. **Good.**

3. **Condition of the control gates, mechanisms and flap gates.**

    a. **Good.**

4. **Condition of log boom.**

    a. **Good.**

5. **Condition of gauging house and equipment.**

    a. **Good.**

6. **Condition of revetment.**

    a. **Good.**

7. **Accumulation of trash and debris around the structure or in the channel.**

    a. **Minimal.**

8. **Comments:**

    a. **Good Maintenance.**

INSPECTION OF BUTTE SLOUGH OUTFALL STRUCTURE
(Maintained by State of California)
September 2002

The intake side of the structure.

The outlet side of the structure.

INSPECTION OF BUTTE SLOUGH DRAINAGE STRUCTURE
(Maintained by State of California)
September 2002

1. **Condition of the corrigated metal pipe (CMP) drainage structure.**

   a. **Good.**

2. **Condition of the control gate, mechanisms, and flap gates.**

   a. **Could not properly inspect due to excessive vegetation.**

3. **Condition of the revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the inlet, in the pipe or in the channel.**

   a. **Could not properly inspect due to excessive vegetation.**

5. **Vegetation around the structure or in the channel.**

   a. **Heavy vegetation around structure. Growth is so dense that intake and discharge ends of structure cannot be seen.**

6. **Comments:**

   a. **Remove vegetation from inlet and discharge ends of structure. If growth is not removed, the drainage structure could become non functional.**

   b. **No maintenance.**

INSPECTION OF BUTTE SLOUGH DRAINAGE STRUCTURE
(Maintained by State of California)
September 2002

CMP stand pipe in the center of picture, obscured by heavy growth.

The inlet channel.

INSPECTION OF BUTTE SLOUGH DRAINAGE STRUCTURE
(Maintained by State of California)
September 2002

Dense growth covering the outlet.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 1
(Maintained by State of California)
September 2002

1. Condition of the main pump structure.

a. Good.

2. Condition of abutments and wing walls.

a. Good.

3. Condition of pumps and motors.

a. Good.

4. Condition of control gates, mechanisms, and flap gate.

a. Good.

5. Condition of electrical equipment.

a. Good.

6. Condition of trash rack.

a. Good.

7. Condition of revetment.

a. Good.

8. Accumulation of trash and debris in the sump.

a. None.

9. Vegetation in the inlet channel.

a. None.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 1
(Maintained by State of California)
September 2002

10. Comments:

a. Tests of pumps, motors and electrical equipment are conducted in October each year.

b. Good maintenance.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 1
(Maintained by State of California)
September 2002

The intake side of the pumping plant.

The discharge side of the pumping plant.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 2
(Maintained by State of California)
September 2002

1. **Condition of main pump structure.**

   a. **Good.**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of pumps and motors.**

   a. **Good.**

4. **Condition of control gates, mechanisms, and flap gates.**

   a. **Good.**

5. **Condition of electrical equipment.**

   a. **Good.**

6. **Condition of the trash racks.**

   a. **Good.**

7. **Condition of revetment.**

   a. **Good.**

8. **Accumulation of trash or debris in the sump.**

   a. **None.**

9. **Vegetation in the inlet channel.**

   a. **None.**

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 2
(Maintained by State of California)
September 2002

10. Comments:

a. Tests of the pumps, motors, and electrical equipment are conducted in October each year.

b. Good maintenance.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 2
(Maintained by State of California)
September 2002

The pumping plant, sump and trash racks from the intake side.

The discharge side of the pumping plant.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 3
(Maintained by State of California)
September 2002

1. Condition of main pump structure.

a. Good.

2. Condition of abutments and wing walls.

a. Good.

3. Condition of pumps and motors.

a. Good.

4. Condition of control gate, mechanisms and flap gate.

a. Good.

5. Condition of electrical equipment.

a. Good.

6. Condition of the trash racks.

a. Good.

7. Accumulation of trash or debris in the sump.

a. None.

8. Vegetation in the inlet channel.

a. None.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 3
(Maintained by State of California)
September 2002

9. Comments:

a. Tests of the pumps, motors and electrical equipment are conducted in October each year.

b. Good maintenance.

INSPECTION OF SUTTER BYPASS PUMPING PLANT NO. 3
(Maintained by State of California)
September 2002

The inlet side of the pumping plant.

The discharge side of the pumping plant.

INSPECTION OF WADSWORTH CANAL WEIR NO. 4
(Maintained by State of California)
September 2002

1. Condition of concrete weir structure.

a. Good.

2. Condition of concrete abutments.

a. Good.

3. Accumulation of trash and debris around the structure or in the channel.

a. None.

4. Vegetation around structure or in the channel.

a. None.

5. Comments:

a. Good maintenance.

INSPECTION OF WADSWORTH CANAL WEIR NO. 4
(Maintained by State of California)
September 2002

Upstream side of structure from the left bank levee.

Downstream side of structure from the left bank levee.

INSPECTION OF SUTTER BYPASS WEIR NO. 2
(EAST BORROW PIT)
(Maintained by State of California)
September 2002

1. **Condition of concrete weir structure.**

   a. **Good.**

2. **Condition of concrete abutments.**

   a. **Good.**

3. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

4. **Vegetation around structure or in the channel.**

   a. **None.**

5. **Comments:**

   a. **Good maintenance.**

INSPECTION OF SUTTER BYPASS WEIR NO. 2
(EAST BORROW PIT)
(Maintained by State of California)
September 2002

Upstream side of the structure.

Downstream side of the structure.

INSPECTION OF NELSON BEND QUARRY ROCK WEIR
(Maintained by State of California)
September 2002

1. Condition of quarry rock weir section.

a. Good.

2. Condition of revetments.

a. Good.

3. Accumulation of trash and debris around structure or in the channel.

a. Areas of debris exist along the weir and in the channel.

4. Vegetation around structure or in the channel.

a. Vegetation is very heavy, with trees, brush and berries on the weir section and in the rock revetments.

5. Comments:

a. No clearing done since 1985. The vegetation is extremely dense and could impair the functioning of the weir.

b. Poor maintenance.

6. Barricade's:

a. An unauthorized barricade has been installed at each end of Nelson Bend rock weir, a barbed wire fence runs parallel to the weir from one barricade to the other.

INSPECTION OF NELSON BEND QUARRY ROCK WEIR
(Maintained by State of California)
September 2002

Looking southwest at the growth and debris on the rock weir.

Looking north from the approximate midway point of the weir at the dense vegetation and debris.

INSPECTION OF NELSON BEND QUARRY ROCK WEIR
(Maintained by State of California)
September 2002

Looking north from the southwest end of the rock weir.

INSPECTION OF KNIGHTS LANDING OUTFALL STRUCTURE
(Maintained by State of California)
September 2002

1. Condition of outfall structure.

a. Good.

2. Condition of bulkheads.

a. Fair. The large vertical crack and displacement on the downstream side, left bank, does not appear to have enlarged. The crack is not accessible for measurement, but the overall width is estimated to be 1 inch.

b. The concrete construction joint between the left bulkhead and the outfall structure, upstream side, passes water when the Sacramento River is at high stage. Passage of water was first noticed in 1980.

3. Condition of the pipes.

a. Good.

4. Condition of the control gates, mechanisms, and flap gates.

a. Good.

5. Condition of electrical equipment.

a. Good.

6. Condition of the gauging house and equipment.

a. Good.

7. Condition of the log boom.

a. Good

8. Condition of fill from bulkheads to levee.

a. Good.

INSPECTION OF KNIGHTS LANDING OUTFALL STRUCTURE
(Maintained by State of California)
September 2002

9. Accumulation of trash and debris around the structure or in the channel.

a. Due to the release of water, trash and debris is collecting around the log boom and screw gates.

10. Comments:

a. Structure is inspected daily.

b. The seepage through the structure should be monitored during high water stages.

c. Sacramento Maintenance Facility performs a yearly pre-season inspection of the structure and its components before October 15.

d. Remove the debris on the right bank upstream of the structure.

e. Good maintenance.

INSPECTION OF KNIGHTS LANDING OUTFALL STRUCTURE
(Maintained by State of California)
September 2002

Upstream side of structure from the right bank.

Downstream side of the structure from the right bank.

INSPECTION OF KNIGHTS LANDING OUTFALL STRUCTURE
(Maintained by State of California)
September 2002

There is a large vertical crack and displacement on the downstream side of structure.

INSPECTION OF FREMONT WEIR
(Maintained by state of California)
September 2002

1. Condition of concrete weir and stilling basin.

a. Some cracks and spalling exist on the weir and in the stilling basin.

2. Condition of concrete abutment.

a. Good.

b. The crack on the downstream side of the right (west) abutment, and the two cracks on the right abutment at Rattlesnake Island, have not enlarged.

3. Condition of revetment.

a. Good.

4. Accumulation of trash and debris around the structure or in the channel.

a. Minimal.

5. Vegetation around the structure or in the channel.

a. Minimal.

b. Minimal.

6. Condition of gauging house and equipment.

a. Good.

7. Comments:

a. Monitor the cracks and spalling and repair as needed.

b. Remove debris from the stilling basin prior to flood season.

c. Good maintenance.

INSPECTION OF FREMONT WEIR
(Maintained by state of California)
September 2002

View of weir and stilling basin from the north abutment.

Looking towards Rattlesnake Island.

INSPECTION OF FREMONT WEIR
(Maintained by state of California)
September 2002

Spalling on the crown of the weir.

Looking northwest from the southern abutment.

INSPECTION OF CACHE CREEK SETTLING BASIN WEIR AND DRAINAGE STRUCTURE
(Maintained by State of California)
September 2002

1. **Condition of concrete weir structure and stilling basin.**

   a. **Good.**

2. **Condition of drainage structure.**

   a. **Good.**

3. **Condition of concrete abutments and wing walls.**

   a. **Previously reported 1/4-inch crack, approximately 8 feet in length in the center of the south abutment has stabilized.**

   b. **Previously reported 1/4-inch crack, approximately 4 feet in length in the center of the north abutment has stabilized**

   c. **There are two (2) additional hairline cracks, approximately 4 feet in length in the center of the north abutment above the 1/4-inch crack. They appear stabile.**

4. **Condition of revetment.**

   a. **Good.**

5. **Accumulation of trash and debris around the structures or in the channels.**

   a. **None.**

6. **Vegetation around the structures or in the channel.**

   a. **Minor.**

7. **Comments:**

   a. **Good maintenance.**

INSPECTION OF CACHE CREEK SETTLING BASIN WEIR AND DRAINAGE STRUCTURE
(Maintained by State of California)
September 2002

Looking northeast at the weir and settling basin.

View of the drainage structure.

INSPECTION OF CACHE CREEK SETTLING BASIN WEIR AND DRAINAGE STRUCTURE
(Maintained by State of California)
September 2002

Outlet for the drainage structure.

INSPECTION OF SACRAMENTO WEIR
(Maintained by State of California)
September 2002

1. Condition of concrete weir section and stilling basin.

a. Good.

b. Minor debris accumulation in stilling basin.

2. Condition of concrete bulkheads.

a. Good.

3. Condition of the needle boards, batting and boots (hinges).

a. Good.

4. Condition of tripping mechanisms.

a. Good.

5. Condition of the metal stop logs, cables and clamps used to retain the needle boards.

a. Good.

6. Accumulation of trash and debris around the structure or in the channel.

a. There is a minimal amount of trash and debris in the stilling basin and in the channel.

7. Vegetation around the structure or in the channel.

a. Minor Vegetation.

INSPECTION OF SACRAMENTO WEIR
(Maintained by State of California)
September 2002

8. Comments:

a. A final pre-season operational inspection is scheduled for the week of October 1-10 by the Sacramento Maintenance Facility.

b. Remove the growth, trash, and debris from around the structure.

c. Good maintenance.

INSPECTION OF SACRAMENTO WEIR
(Maintained by State of California)
September 2002

Outlet side of weir from the north end.

Outlet side of weir from the south end.

INSPECTION OF MAGPIE CREEK PUMPING PLANT
(Maintained by City of Sacramento)
September 2002

1. **Condition of main pump structure.**

   a. **Good.**

2. **Condition of abutment and wing walls.**

   a. **Good.**

3. **Condition of the pumps and motors.**

   a. **Good.**

4. **Condition of control gates, mechanisms, and flap gates.**

   a. **Good**

5. **Condition of the electrical equipment.**

   a. **Good.**

6. **Condition of the trash racks.**

   a. **Good.**

7. **Accumulation of trash debris in the sump or in the channel.**

   a. **Minimal.**

8. **Vegetation in the sump or in the inlet channel.**

   a. **None.**

9. **Comments:**

   a. **Good maintenance**

   b. **There is a weekly, monthly and an annual inspection of pumps**

INSPECTION OF MAGPIE CREEK PUMPING PLANT
(Maintained by City of Sacramento)
September 2002

Pumping plant, sump, and trash racks at inlet side on the landward side from the left bank levee of the Natomas East Main Drain.

Discharge end of structure on the water ward side from the left bank levee of the Natomas East Side Drain.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 1
(Maintained by Sacramento County as Howe Avenue Storm Drain D-05)
September 2002

1. Condition of the main pump structure.

a. Good.

2. Condition of abutments and wing walls.

a. Good.

3. Condition of pumps and motors.

a. Good.

4. Condition of gate controls, mechanisms and flap gates.

a. Good.

5. Condition of electrical equipment.

a. Good.

6. Condition of the trash racks.

a. New automated trash racks are being constructed.

7. Accumulation of trash and debris in the sump or around the structure.

a. None.

8. Vegetation in the sump or in the inlet channel.

a. None.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 1
(Maintained by Sacramento County as Howe Avenue Storm Drain D-05)
September 2002

9. Comments:

a. Inspection and tests of all systems are conducted yearly.
1. Annual maintenance on system done in June and July.

b. Sacramento County is constructing an automated trash rack system at this site.

c. Outstanding maintenance.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 1
(Maintained by Sacramento County as
Howe Avenue Storm Drain D-05)
September 2002

Pumping plant, sump and trash racks at inlet on the landward side of the right bank levee of the American River.

Gate controls and gates at the discharge side of the pumping plant.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 2
(Maintained by Sacramento County as Willhaggin Storm Drain D-43)
September 2002

1. Condition of the main pump structure.

a. Good.

2. Condition of abutments and wing walls.

a. There is a three and five eighth inch deflection in the retaining wall next to the stairway on the west side of structure.

3. Condition of pumps and motors.

a. Good.

4. Condition of control gates, mechanisms, and flap gates.

a. Good.

5. Condition of electrical equipment.

a. Good.

6. Condition of trash racks.

a. Good.

7. Accumulation of trash and debris in the upper and lower sumps.

a. None.

8. Vegetation in the upper and lower sumps.

a. Minor growth.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 2
(Maintained by Sacramento County as Willhaggin Storm Drain D-43)
September 2002

9. Comments:

a. Inspections and tests of all systems are conducted yearly.
- **1. Annual maintenance done in September and October.**
- **2. Sump maintenance done in September and October.**

b. There has been no measurable change in the three and five eighth inch deflection in the western retaining wall since last reported in 1998.

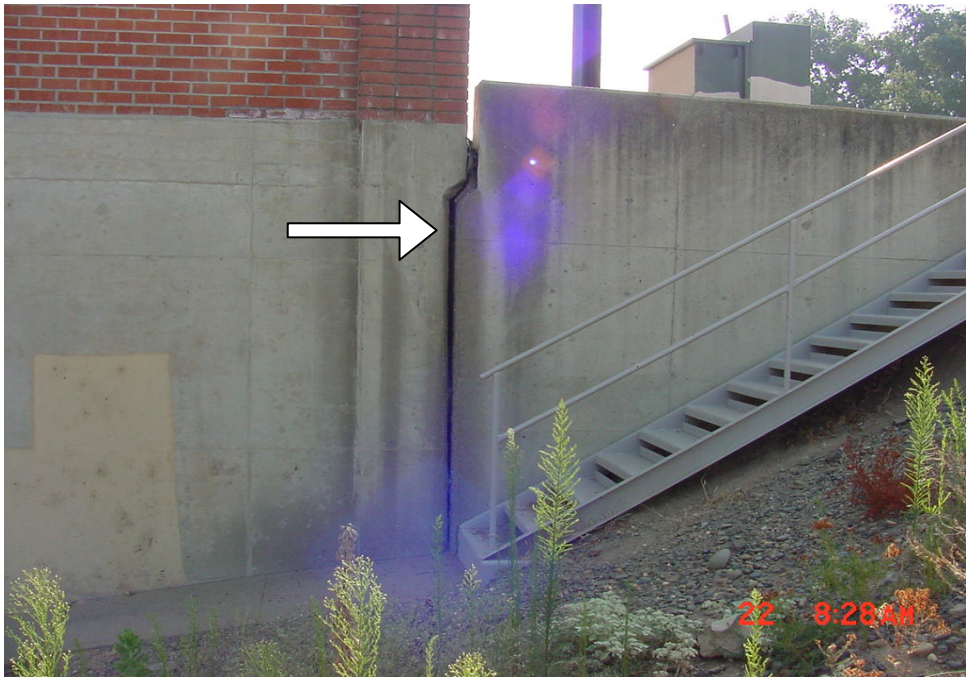
c. Outstanding maintenance.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 2
(Maintained by Sacramento County as
Willhaggin Storm Drain D-43)
September 2002

Trash racks on the intake side of the pumping plant.

Gate controls and flap gates on the discharge side of the pumping plant.

INSPECTION OF AMERICAN RIVER PUMPING PLANT NO. 2
(Maintained by Sacramento County as
Willhaggin Storm Drain D-43)
September 2002



Three and five eighth inch deflection in the west retaining wall.

INSPECTION OF ELK SLOUGH INLET STRUCTURE
(Maintained by Reclamation District No. 999)
September 2002

1. Condition of inlet structure.

a. Good.

2. Condition of control gate mechanism.

a. Good.

3. Accumulation of trash and debris around the structure or in the channel.

a. None.

4. Vegetation around the structure.

a. Minor growth around outlet.

5. Comments:

a. Monitor and remove growth around outlet as needed.

b. Good maintenance.

INSPECTION OF ELK SLOUGH INLET STRUCTURE
(Maintained by Reclamation District No. 999)
September 2002

View of the gate control mechanism box.

View of the discharge side into Elk Slough.
The structure is under water.

CHAPTER II

FLOOD CONTROL STRUCTURES INSPECTED ON THE SAN JOAQUIN RIVER AND TRIBUTARIES

2002

INSPECTION OF MORMON SLOUGH PUMPING PLANT NO. 1
(Maintained by San Joaquin County)
September 2002

1. **Condition of main pump structure.**

   a. **Good.**

2. **Condition of pumps and motors.**

   a. **Good.**

3. **Condition of control gates, mechanisms and flap gates.**

   a. **Good.**

4. **Condition of electrical equipment.**

   a. **Good.**

5. **Condition of trash racks.**

   a. **Good.**

6. **Accumulation of trash and debris in the sump.**

   a. **None.**

7. **Vegetation in the sump.**

   a. **None.**

8. **Comments:**

   a. **Good maintenance.**

INSPECTION OF MORMON SLOUGH PUMPING PLANT NO.2
(Maintained by San Joaquin County)
September 2002

Trash racks on the intake side of the pumping plant.

Flood wall, screw gate and
the outlet side of the pumping plant.

INSPECTION OF MORMON SLOUGH PUMPING PLANT NO.2
(Maintained by San Joaquin County)
September 2002

1. Condition of main pump structure.

a. Good.

2. Condition of pumps and motors.

a. Good.

3. Condition of control gates, mechanisms and flap gates.

a. Good.

4. Condition of electrical equipment.

a. Good.

5. Condition of trash racks.

a. Good.

6. Accumulation of trash and debris in the sump.

a. None.

7. Vegetation in the sump.

a. Minimal.

8. Comments:

a. Good maintenance.

INSPECTION OF MORMON SLOUGH PUMPING PLANT NO.2
(Maintained by San Joaquin County)
September 2002

Inlet side of the pumping plant.

Outlet side of the pumping plant.

INSPECTION OF MORMON SLOUGH PUMPING PLANT NO.3
(Maintained by San Joaquin County)
September 2002

1. Condition of main pump structure.

a. Good.

2. Condition of pumps and motors.

a. Good.

3. Condition of control gates, mechanisms and flap gates.

a. Good.

4. Condition of electrical equipment.

a. Good.

5. Condition of trash racks.

a. Good.

6. Accumulation of trash and debris in the sump.

a. None.

7. Vegetation in the sump.

a. None.

8. Comments:

a. Good maintenance.

INSPECTION OF MORMON SLOUGH PUMPING PLANT NO.3
(Maintained by San Joaquin County)
September 2002

Inlet side of the pumping plant.

Flood wall, screw gate and outlet side of the pumping plant.

INSPECTION OF DUCK CREEK DIVERSION
WEIR AND CONTROL STRUCTURE
(Maintained by San Joaquin County)
September 2002

1. **Condition of concrete control structure.**

   a. **Good.**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of control gate and mechanism.**

   a. **Good.**

4. **Condition of the concrete weir structure.**

   a. **Good.**

5. **Condition of the revetment.**

   a. **Good.**

6. **Accumulation of trash and debris around the structure or in the channel.**

   a. **Good.**

7. **Vegetation around the structure or in the channel.**

   a. **Minimal.**

8. **Comments:**

   a. **Good maintenance.**

INSPECTION OF DUCK CREEK DIVERSION
WEIR AND CONTROL STRUCTURE
(Maintained by San Joaquin County)
September 2002

Inlet side of control structure.

Outlet side of the structure.

INSPECTION OF DUCK CREEK DIVERSION
WEIR AND CONTROL STRUCTURE
(Maintained by San Joaquin County)
September 2002

Upstream side of diversion weir.

INSPECTION OF PARADISE DAM
(No Maintaining Agency)
September 2002

1. Condition of the concrete rubble dam section.

a. Good.

2. Accumulation of trash and debris around the structure or in the channel.

a. None.

3. Vegetation around the structure and in the channel.

a. There are small willow trees on the upstream side of the structure.

4. Comments:

a. Willow trees should be removed.

INSPECTION OF PARADISE DAM
(No Maintaining Agency)
September 2002

Upstream side of dam.

Downstream side of dam.

INSPECTION OF WETHERBEE LAKE PUMPING PLANT AND NAVIGATION GATE
(Maintained by Reclamation District No. 2096)
September 2002

1. Condition of main pump structure.

a. Good.

2. Condition of the navigation gate structure.

a. Good.

3. Condition of the abutments and wing walls.

a. Good, but there is a three fourth inch separation in the joint between left retainer wall and wing wall. It has remained stable for several years.

4. Condition of pumps and motors.

a. Good.

5. Condition of flap gates.

a. Good.

6. Condition of electrical equipment.

a. Good.

7. Condition of the trash rack.

a. Good.

8. Condition of the gate hoist mechanism.

a. Good.

9. Condition of the revetment.

a. Good.

INSPECTION OF WETHERBEE LAKE PUMPING PLANT AND NAVIGATION GATE
(Maintained by Reclamation District No. 2096)
September 2002

10. Accumulation of trash and debris around the structure or in the channel.

a. None.

11. Comments:

a. Good maintenance.

INSPECTION OF WETHERBEE LAKE PUMPING PLANT AND NAVIGATION GATE
(Maintained by Reclamation District No. 2096)
September 2002

Downstream side of the structure.

Upstream side of the structure.

INSPECTION OF GOMES LAKE PUMPING PLANT
(Maintained by Turlock Irrigation District)
September 2002

1. **Condition of main pump structure.**

   a. **Good.**

2. **Condition of pumps and motors.**

   a. **Good.**

3. **Condition of the switchboard house and the electrical equipment.**

   a. **Good.**

4. **Condition of the control gates, mechanism and flap gates.**

   a. **Good.**

5. **Condition of the trash racks.**

   a. **Good.**

6. **Condition of the gauging house and equipment.**

   a. **Good.**

7. **Condition of the revetment.**

   a. **Good.**

8. **Accumulation of trash and debris around structure or in the channel.**

   a. **Minimal.**

9. **Vegetation around the structure or in the channel.**

   a. **None.**

10. **Comments:**

    a. **Good maintenance.**

INSPECTION OF GOMES LAKE PUMPING PLANT
(Maintained by Turlock Irrigation District)
September 2002

Intake of the pumping plant.

Discharge side of the structure from the north side.

INSPECTION OF RECLAMATION DISTRICT NO 2063 PUMPING PLANT
(Maintained by Reclamation District No. 2063)
September 2002

1. **Condition of main pump structure.**

   a. **Good.**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of pump and motor.**

   a. **Although the pump is operational the overall appearance of the motor, pump and shed is extremely dirty.**

4. **Condition of control gate, mechanism and flap gate.**

   a. **Good.**

5. **Condition of the trash racks.**

   a. **Fair.**

6. **Accumulation of trash and debris around the structure or in the channel.**

   a. **Debris is covering the upper third of the trash rack.**

7. **Vegetation around the structure or in the outlet channel.**

   a. **Trees at discharge end of structure should be removed.**

8. **Comments:**

   a. **The pumps are tested prior to flood season by Turlock Irrigation District. The motor, pump and shed should be properly maintained.**

   b. **Remove trees at discharge end of structure.**

   c. **Fair maintenance.**

INSPECTION OF RECLAMATION DISTRICT NO 2063 PUMPING PLANT
(Maintained by Reclamation District No. 2063)
September 2002

Trash racks and the structure.

Intake side of the structure.

INSPECTION OF BLACK RASCAL CREEK DROP STRUCTURE
(Maintained by Merced Irrigation District for Merced County)
September 2002

1. **Condition of concrete drop structure.**

    a. **Good.**

2. **Condition of concrete abutments.**

    a. **Good.**

    b. **Separation of the left bank wall is stable.**

3. **Condition of revetment.**

    a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

    a. **None.**

5. **Vegetation around the structure or in the channel.**

    a. **Minimal**

6. **Comments:**

    a. **Good maintenance.**

INSPECTION OF BLACK RASCAL CREEK DROP STRUCTURE
(Maintained by Merced Irrigation District for Merced County)
September 2002

Downstream view of structure.

Upstream view of structure.

INSPECTION OF OWENS CREEK SIPHON STRUCTURE
(Maintained by Merced Irrigation District for Merced County)
September 2002

1. **Condition of concrete siphon structure.**

   a. **Good.**

2. **Condition of concrete abutments and wing walls.**

   a. **Good.**

   b. **Separation of the left bank wall is stable.**

3. **Condition of revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **There is dense tule and weed growth in the channel immediately upstream and downstream of the structure.**

6. **Comments:**

   a. **Remove weeds and tule growth.**

   b. **Fair maintenance.**

INSPECTION OF OWENS CREEK SIPHON STRUCTURE
(Maintained by Merced Irrigation District for Merced County)
September 2002

Upstream side of the structure and the heavy tule growth.

Downstream side of the structure.

INSPECTION OF ASH AND BERENDA SLOUGH CONTROL STRUCTURES
(Maintained by Madera County F.C. & W.C.A.)
September 2002

1. Condition of concrete control structures.

a. Good.

2. Condition of concrete abutments and wing walls.

a. Good.

3. Condition of stop logs and supports.

a. Good.

4. Condition of revetments.

a. Good.

5. Accumulation of trash and debris around the structures or in the channels.

a. None.

6. Vegetation around the control structures or in the channels.

a. Trees in the channel downstream of the Ash Slough Structure .

7. Comments:

a. Remove the trees from the channels and around the structures.

b. Good maintenance.

INSPECTION OF ASH AND BERENDA SLOUGH CONTROL STRUCTURES
(Maintained by Madera County F.C. & W.C.A.)
September 2002

Upstream side of Ash Slough Structure.

Downstream side of the Ash Slough Structure.

INSPECTION OF ASH AND BERENDA SLOUGH CONTROL STRUCTURES
(Maintained by Madera County F.C. & W.C.A.)
September 2002

Upstream side of the Berenda Slough Structure.

Downstream side of the Berenda Slough Structure.

INSPECTION OF FRESNO RIVER DIVERSION WEIR
(Maintained by Madera County F.C. & W.C.A.)
September 2002

1. Condition of concrete weir structure, stilling basin, and velocity dissipaters.

a. Good.

2. Condition of the diversion structure.

a. Good.

3. Condition of the concrete abutments and wing walls.

a. Good.

4. Condition of control gate and mechanisms.

a. Good.

5. Condition of revetments.

a. Good.

6. Accumulation of trash and debris around the structures or in the channel.

a. Good.

7. Vegetation around the structures or in the channel.

a. Dense growth in channel.

8. Condition of gauging house and equipment.

a. Good.

9. Comments:

a. Good maintenance.

INSPECTION OF FRESNO RIVER DIVERSION WEIR
(Maintained by Madera County F.C. & W.C.A.)
September 2002

Upstream side of the structure.

Downstream side of the structure.

INSPECTION OF BEAR CREEK DIVERSION STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete weir structure and stilling basin.**

   a. **Good.**

2. **Condition of concrete abutments and wing walls.**

   a. **Good.**

3. **Condition of revetment.**

   a. **Damage to left bank upstream of structure.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **Yes, on downstream side of structure.**

6. **Comments:**

   a. **Repair left bank before next flood season.**

   b. **Good maintenance.**

INSPECTION OF BEAR CREEK DIVERSION STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Upstream side of the structure.

Downstream side of the structure.

INSPECTION OF OWENS CREEK CONTROL STRUCTURE
(Maintained by the Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete control structure.**

   a. **Good**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of stop logs and supports.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **Yes, on Downstream of structure.**

6. **Comments:**

   a. **This structure was in existence prior to the construction of the project and is a part of the Lower San Joaquin Levee District but is operated by Eastside Canal Company. The structure is showing some wear from aging but is still in good condition.**

   b. **Good maintenance.**

INSPECTION OF OWENS CREEK CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Upstream side of the structure from the left bank.

Downstream side of the structure from the right bank.

INSPECTION OF OWENS CREEK OVERFLOW STRUCTURE
(Maintained by the Lower San Joaquin Levee District)
September 2002

1. **Condition of the concrete overflow structure.**

    a. **Fair, the concrete apron on the discharge side is damaged.**

2. **Condition of the abutments and wing walls.**

    a. **Good.**

3. **Condition of the control gates and mechanism.**

    a. **Good.**

4. **Condition of the revetment.**

    a. **Good.**

5. **Accumulation of trash and debris around the structure or in the channel.**

    a. **None.**

6. **Vegetation around the structure or in the channel.**

    a. **None.**

7. **Comments:**

    a. **Fair maintenance.**

    b. **Repair the concrete apron on the discharge side of the structure.**

    c. **Replace moved revetment at downstream edge of structure.**

INSPECTION OF OWENS CREEK OVERFLOW STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

View of the two 72 inch slide gates at the intake side of the structure.

View of the discharge side of the structure where it empties into the Eastside Bypass.

INSPECTION OF MARIPOSA BYPASS CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete control structure.**

   a. **Good.**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of radial gate and mechanisms.**

   a. **Good.**

4. **Condition of electrical equipment.**

   a. **Good.**

5. **Condition of gate hoist equipment.**

   a. **Good.**

6. **Condition of revetments.**

   a. **Good.**

7. **Accumulations of trash and debris around the structure or in the channel.**

   a. **None.**

8. **Vegetation around the structure or in the channel.**

   a. **None.**

9. **Comments:**

   a. **All the electrical equipment is tested prior to each flood season.**

   b. **Good maintenance.**

   c. **Two electrical motors was replace this year.**

INSPECTION OF MARIPOSA BYPASS CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Upstream side of the structure.

Downstream side of the structure.

INSPECTION OF THE EASTSIDE BYPASS CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete control structure.**

   a. **Good.**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of radial gate and mechanisms.**

   a. **Good.**

4. **Condition of electrical equipment.**

   a. **Good.**

5. **Condition of gate hoist equipment.**

   a. **Good.**

6. **Condition of engine generator set.**

   a. **Good.**

7. **Condition of float wells and allied equipment.**

   a. **Good.**

8. **Condition of revetment.**

   a. **Rock on the banks is in place but a large scour hole has developed downstream of gates.**

9. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

INSPECTION OF THE EASTSIDE BYPASS CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

10. Vegetation around the structure or in the channel.

a. None.

11. Comments:

a. All the equipment is tested and serviced prior to flood season each year. This structure is well maintained and is in excellent condition.

b. Fill in scour hole.

d. Good maintenance.

e. Six hydraulic brakes are scheduled to be replaced this year.

INSPECTION OF THE EASTSIDE BYPASS CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Upstream side of the structure.

Downstream side of the structure.

INSPECTION OF MARIPOSA BYPASS DROP STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drop structure, stilling basin, and velocity dissipaters.**

   a. **Good.**

2. **Condition of concrete abutments and wing walls.**

   a. **Left wing wall has three fourth inch separation at the joint but otherwise it is in excellent condition.**

3. **Condition of revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **None.**

6. **Comments:**

   a. **Good maintenance.**

INSPECTION OF MARIPOSA BYPASS DROP STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Upstream side of the structure.

Downstream side of the structure.

INSPECTION OF SAN JOAQUIN RIVER STRUCTURE AND SAND SLOUGH STRUCTURE (Maintained by Lower San Joaquin Levee District) September 2002

1. Condition of San Joaquin River Structure.

   a. Good.

2. Condition of the abutments, wing walls, and bulkheads.

   a. Good.

3. Condition of control gates and mechanisms.

   a. Good.

4. Condition of the Sand Slough Structure (Parshall flume) and wing walls.

   a. Good.

5. Condition of the revetment.

   a. Good.

6. Accumulation of trash or debris around structure or in the channel.

   a. None.

7. Comments:

   a. This structure is tested and serviced prior to each flood season.

   f. Good maintenance.

   g. Three hydraulic brakes were replaced this year.

INSPECTION OF SAN JOAQUIN RIVER STRUCTURE
AND SAND SLOUGH STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Control gates and mechanisms
on the upstream side of the San Joaquin River Structure.

Downstream side of the structure.

INSPECTION OF SAN JOAQUIN RIVER STRUCTURE
AND SAND SLOUGH STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Sand Slough Structure from the Washington Street Bridge.

INSPECTION OF FRESNO RIVER DRAINAGE STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drainage structure.**

   a. **Good.**

2. **Condition of abutments and wing walls.**

   a. **Good.**

3. **Condition of control gate, mechanism, and flap gate.**

   a. **The control mechanism is bent.**

4. **Condition of revetment.**

   a. **Good.**

5. **Accumulation of trash and debris around the structure or in the channel.**

   a. **Good.**

6. **Vegetation around the structure or in the channel.**

   a. **None.**

7. **Comments:**

   a. **The control mechanism for the gate needs to be straightened but otherwise, this structure is in good condition.**

INSPECTION OF FRESNO RIVER DRAINAGE STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Intake side of the structure.

Discharge side of the structure.

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO.1(Downstream)
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drop structure, stilling basin, and velocity dissipaters.**

   a. **Good.**

2. **Condition of concrete abutments and wing walls.**

   a. **Good.**

3. **Condition of revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **None.**

6. **Comments:**

   a. **Good maintenance.**

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 1(Downstream)
(Maintained by Lower San Joaquin Levee District)
September 2002

Downstream side of the structure.

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 2
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drop structure, stilling basin, and velocity dissipaters.**

   a. **Good.**

2. **Condition of concrete abutments and wing walls.**

   a. **Good.**

3. **Condition of revetments.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **None.**

6. **Comments:**

   a. **Good maintenance.**

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 2
(Maintained by Lower San Joaquin Levee District)
September 2002

Downstream side of the structure.

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 3
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drop structure, stilling basin and velocity dissipaters.**

   a. **Good, except the velocity dissipaters are covered with sand.**

2. **Condition of concrete abutments and wing walls.**

   a. **Good.**

3. **Condition of revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **None.**

6. **Comments:**

   a. **This structure is in good condition but needs to have the sand removed from the stilling basin.**

   b. **Fair maintenance.**

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 3
(Maintained by Lower San Joaquin Levee District)
September 2002

Stilling basin and the
sand covered velocity dissipaters.

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 4
(Maintained by Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drop structure, stilling basin, and velocity dissipaters.**

   a. **What can be seen is in good condition, but a seasonal sand dam is in place backing up water for irrigation purposes on the upstream side.**

2. **Condition of concrete abutment wing walls.**

   a. **Good.**

3. **Condition of revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **Bamboo growing along right wing wall.**

6. **Comments:**

   a. **The seasonal sand dam on the upstream side is for irrigation purposes and can be easily breached or washed out in the event of high water.**

   b. **Remove bamboo.**

INSPECTION OF ASH SLOUGH DROP STRUCTURE NO. 4
(Maintained by Lower San Joaquin Levee District)
September 2002

Downstream side of the drop structure.

Seasonal sand irrigation dam with two culverts installed.

INSPECTION OF EASTSIDE BYPASS DROP STRUCTURE NO. 1
(Maintained by the Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete drop structure, stilling basin and velocity dissipaters.**

   a. **Good.**

2. **Condition of concrete abutments and wing walls.**

   a. **Good.**

3. **Condition of revetment.**

   a. **Fair one third of revetment gone.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation around the structure or in the channel.**

   a. **None.**

6. **Comments:**

   a. **Good maintenance.**

INSPECTION OF EASTSIDE BYPASS DROP STRUCTURE NO. 1
(Maintained by the Lower San Joaquin Levee District)
September 2002

North at the stilling basin and the velocity dissipaters.

INSPECTION OF EASTSIDE BYPASS DROP STRUCTURE NO. 2
(downstream)
(Maintained by the Lower San Joaquin Levee District)
September 2002

1. **Condition of concrete structure, stilling basin, and velocity dissipators.**

   a. **Good.**

   b. **It was noted last year that concrete spalling exists on the floor of the stilling basin. This was first noted in 1969.**

2. **Condition of concrete abutments and wingwalls.**

   a. **Good.**

3. **Condition of revetment.**

   a. **Good.**

4. **Accumulation of trash and debris around the structure or in the channel.**

   a. **None.**

5. **Vegetation and debris around the structure or in the channel.**

   a. **None.**

6. **Comments:**

   a. **Good maintenance.**

INSPECTION OF EASTSIDE BYPASS DROP STRUCTURE NO. 2
(Maintained by the Lower San Joaquin Levee District)
September 2002

Downstream side of the structure.

INSPECTION OF SAN JOAQUIN RIVER AND CHOWCHILLA CANAL BYPASS CONTROL STRUCTURE (Maintained by Lower San Joaquin Levee District) September 2002

1. **Condition of the San Joaquin River Control Structure.**

   a. **Good.**

2. **Condition of the Chowchilla Canal Bypass Structure.**

   a. **Good.**

3. **Condition of the abutments and wingwalls.**

   a. **Good.**

4. **Condition of the radial gates and mechanisms.**

   a. **Good.**

5. **Condition of the gate hoist equipment.**

   a. **Good.**

6. **Condition of the engine generator set.**

   a. **Good.**

7. **Condition of the floatwells and equipment.**

   a. **Good.**

8. **Accumulation of trash and debris around the structures or in the channel.**

   a. **None.**

9. **Vegetation around the structures or in the channel.**

   a. **None.**

INSPECTION OF SAN JOAQUIN RIVER AND CHOWCHILLA CANAL BYPASS CONTROL STRUCTURE (Maintained by Lower San Joaquin Levee District) September 2002

10. Comments:

a. All equipment is tested and serviced by the U.S. Bureau of Reclamation prior to flood season.

b. Remove debris against San Joaquin River Control Structure trashrack.

h. Good maintenance.

i. One hydraulic brake was replace this year

INSPECTION OF SAN JOAQUIN RIVER AND CHOWCHILLA CANAL BYPASS CONTROL STRUCTURE (Maintained by Lower San Joaquin Levee District) September 2002

Upstream side of the Chowchilla Canal Bypass structure.

Downstream at the Chowchilla Canal Bypass.

INSPECTION OF SAN JOAQUIN RIVER AND CHOWCHILLA CANAL BYPASS CONTROL STRUCTURE
(Maintained by Lower San Joaquin Levee District)
September 2002

Downstream side of the San Joaquin River Control Structure.

Upstream side of the San Joaquin River Control Structure.